

## METHOD AND APPARATUS FOR PROVIDING A GRAPHICAL DEPICTION OF EVENTS

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### FIELD OF THE INVENTION

10 The present invention relates to the graphical depiction of events. In particular,  
the present invention relates to the depiction of life events using textual description and  
graphical images.

### BACKGROUND OF THE INVENTION

Increasingly, consumers desire personalized products. For example, greeting card  
15 companies and others allow consumers to create greeting cards containing user selected  
text and graphics. In addition, scrapbooks in which photographs, memorabilia and  
annotations may be placed have long been available. Additionally, computer programs  
allow users to associate user defined text with user selected graphics. However, available  
automated methods for associating text with graphics, such as greeting card programs and  
20 word processing programs with graphical capabilities, do not lend themselves to  
graphically depicting a chronology of events.

A time line is a useful method for displaying a chronology of events. Although  
time lines combining text and graphical images have been used, for example in

connection with descriptions of historical events, such time lines have been laborious to produce. In particular, such time lines have required their creators to select and format any textual description, obtain and select appropriate graphical images, if any, and manually arrange the text and images in an appropriate order along the time line.

5 Furthermore, time lines are typically constructed along a straight, unadorned line, and are therefore visually uninteresting.

It would be advantageous to provide a method and an apparatus that enabled users to graphically depict a chronology of events using text and associated graphics. In addition, it would be advantageous to provide a method and an apparatus for graphically depicting events that formatted text entered by a user and associated graphics selected by the user for display along a path. Furthermore, it would be advantageous to provide such a method and an apparatus that could be provided on a per use basis over a computer network, such as the Internet. It would also be advantageous to provide a method and an apparatus that provided a user with images available for association with text entered by the user that were sorted according to predetermined themes. Furthermore, it would be advantageous to provide a method and an apparatus for graphically depicting events that allowed users to produce hard copies or electronic copies of the graphical depiction created by the user, and that could be provided at reasonable cost, without requiring input from any person other than the user.

## 20 SUMMARY OF THE INVENTION

In accordance with the present invention, a method and an apparatus for graphically depicting events are provided. The present invention generally allows a user

to select an image related to an event and place the selected image on a time line according to a predetermined format. The user may also be allowed to enter text to associate with each selected image. The text may describe events that form part of a chronology of events. The text and associated graphics are placed on a time line according to a predetermined format. The graphical depiction of events, or story map, thus created may be output by the user for display or later reference.

According to one embodiment of the present invention, a method and an apparatus are provided in which a user may insert a title for the graphical depiction of events. The user may also enter a textual description of an event. The user may then select from a set of images an image for association with the entered text. The user may establish a plurality of textual description and image pairs. The particular format, including the shape of the time line, the beginning and end points, and the locations of positions provided for placing images and text may be selected by the user. The text and image pairs are arranged along a time line according to the selected format. In this way, the events within a chronology of events may be displayed in chronological order along a line.

According to an embodiment of the present invention, the images available to a user for association with textual description are in accordance with a selected theme. For example, the user may select from achievements, future, growing up, interests, hobbies, marriage, anniversary, sports, athletics, babies, generic, high school, college graduation, retirement, work, career and life change themes. Accordingly, the user is presented with only those images that are in accordance with the user selected theme. According to

another embodiment of the present invention, the user may choose to enter text for placement along the time line, without selecting images for association with the entered text.

According to still another embodiment of the present invention, a user may edit the entered text and selected images until a final version of the map graphically depicting the events is created. Furthermore, the user may be allowed to create a full color, high resolution hard copy output of the map after a final version has been created.

In accordance with still another embodiment of the present invention, maps depicting converging events may be created. According to yet another embodiment of the present invention, depictions of events contained on a first map may be formatted to link with depictions of events contained on a second map.

In accordance with an embodiment of the present invention, the time line about which the images and/or text graphically depicting events is arranged is a path. In accordance with a further embodiment of the present invention, the path may be depicted as a road, railroad tracks, a river, a sidewalk, or a footpath.

According to still another embodiment of the present invention, the user may choose a different background or path. When a new background or path is chosen, text and images associated with the originally selected background or path are associated with the newly selected background or path automatically.

Based on the foregoing summary, a number of salient features of the present invention are readily discerned. A method and an apparatus for graphically depicting a series of events are provided. The method and apparatus of the present invention enable

users to enter text that may be selectively associated with graphical images. The graphical images may be chosen by users from sets of images arranged according to predetermined themes. The method and apparatus of the present invention formats the user entered text and associated image, and places the text and associated image, if any, along a path. The path may be used to create a time line. The present invention facilitates the depiction of a chronology of events, such as events related to a major life event. In addition, the present invention provides a framework for arranging a depiction of events, and allows the depiction of events to be illustrated as selected by the user.

Additional advantages of the present invention will become readily apparent from the following discussion, particularly when taken together with the accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**Fig. 1** is a block diagram depicting the major components of a system in accordance with an embodiment of the present invention;

**Fig. 2** is a block diagram depicting the major divisions of a database used in connection with an embodiment of the present invention;

**Fig. 3** is a depiction of a background template in accordance with an embodiment of the present invention;

**Fig. 4** is a functional flow diagram depicting the operation of an embodiment of the present invention;

**Fig. 5** is an example story map created using a story map builder in accordance with an embodiment of the present invention;

**Fig. 6** is a screen shot of a home page in accordance with an embodiment of the present invention;

**Fig. 7** is a screen shot of a story map builder home page in accordance with an embodiment of the present invention;

5        **Fig. 8** is a screen shot of a log-in web page in accordance with an embodiment of the present invention;

**Fig. 9** is a screen shot of a story map selection web page in accordance with an embodiment of the present invention;

10       **Fig. 10** is a screen shot of a new map name and title web page in accordance with an embodiment of the present invention;

**Fig. 11** is a screen shot of a web page to select a previously created story map in accordance with an embodiment of the present invention;

**Fig. 12** is a screen shot of a background selection web page in accordance with an embodiment of the present invention;

15       **Fig. 13** is a screen shot of a selected background web page in accordance with an embodiment of the present invention;

**Fig. 14** is a screen shot of an image theme selection web page in accordance with an embodiment of the present invention;

20       **Fig. 15** is a screen shot of a subtheme selection web page in accordance with an embodiment of the present invention;

**Fig. 16** is a screen shot of an image selection web page in accordance with an embodiment of the present invention;

**Fig. 17** is a screen shot of a web page showing an example of a background and a first selected image in accordance with an embodiment of the present invention;

**Fig. 18** is a screen shot of a text entry web page in accordance with an embodiment of the present invention; and

5        **Fig. 19** is a screen shot of a web page showing an example of a background and a first selected image and first selected text in accordance with an embodiment of the present invention.

### DETAILED DESCRIPTION

10        **Fig. 1** illustrates a system **100** in accordance with an embodiment of the present invention. The system **100** generally includes a server computer **104**, a network **108**, and a client computer **112**.

15        The server **104** generally includes a network interface **116** interconnected to a processor **120**, which is in turn interconnected to storage **124**. The storage **124** may include a database **128** and a stored server application program **136**. The server application program **136** may include page templates **138** for generating web pages that are provided to the network **108** for display on the client computer **112**.

20        The network **108** may be any computer network or communication network capable of being used to establish communications between two computers. In addition, the network **108** may be formed from a number of such computer networks or communication systems. According to one embodiment of the present invention, the network **108** includes the Internet.

The client computer **112** may include a network interface **140** interconnected to a processor **144** that is in turn interconnected to storage **148**. According to one embodiment of the present invention, the client computer **112** is any general or personal type computer. In particular, the client computer **112** may be any computer capable of running a graphical web browser that enables a Flash plug-in. According to a further embodiment of the present invention, the client computer **112** is a PC computer running on a MICROSOFT WINDOWS operating system, or an APPLE computer running an APPLE operating system. The storage **148** may contain operating system software **152** and communications software necessary for the client computer **112** to communicate with a server **104** over a network **108**, such as an Internet browser program **156**. A printer **160**, and user interface devices, such as a user display **164**, a keyboard **168** and a mouse **172** may be operatively connected to the client computer **112**.

With reference now to **Fig. 2**, the major divisions of a database **128** in accordance with an embodiment of the present invention are illustrated. In particular, the database **128** includes a story map builder utility **200**. The story map builder utility may be subdivided into a customer data table **204**, a templates table **208**, an images table **212**, a maps table **216**, and a map parameters table **220**. Additional tables may be provided as deemed necessary to provide a logical and convenient division of information and to provide for the efficient administration of the system **100**. For example, a table can be created for collecting information regarding how often particular images are selected by users. Interconnections or dependencies between the divisions of the database **128** are also illustrated in **Fig. 2**.



The customer data table **204** generally includes a record for each customer or user of a service implementing an embodiment of the method or apparatus of the present invention. Within the customer data records are various fields, such as a name, e-mail and password field. According to one embodiment of the present invention, all or none of the fields provided within a record in the customer data database need to be completed. For example, a customer or user may construct a graphical depiction of events, or story map, without providing any identifying information. Alternatively, an entry in each or a selected subset of the fields may be required before a user is permitted to create a story map or perform certain functions with respect to a story map. For example, in accordance with one embodiment of the present invention, a user is required to provide an e-mail address as an identifier and a password prior to saving a story map. In addition to the fields for containing user data, each customer data record may contain references to one or more story maps created by the user.

The maps table **216** may include records containing general information regarding story maps created in connection with associated customer data records. The story map records may include the name assigned to the story map by the user, such as a file name, the title of the story map entered by the user, the selected background, whether the story map has been purchased, and the date that the story map was created. The records in the map table may further include information associating each story map with a record in the map parameters table **220**.

Each story map parameter record stored as part of the map parameters table **220** may include fields for storing text values that are associated with each text position

provided by the map background specified in the maps table **216** for the associated story map. Accordingly, text fields are provided for as many text positions as are provided by the selected background, as will be described in greater detail below. Records in the map parameters table **220** may also include fields containing information regarding images selected for placement at predefined positions on a selected background. Accordingly, at least as many image fields may be provided by a record in the map parameters table **220** as there are image positions provided on a selected background.

Each record in the map parameters table **220** is associated a map template stored in the map templates table **208**. In general, each map template includes graphical and formatting information related to the background selected by the user, which selection is reflected by the value stored in the background field of the related record in the maps table **216**.

As noted above, a record in the map parameters table **220** may contain fields that refer to one or more images stored in the images table **212**. In particular, images stored as part of the images table may be associated with each milepost or available position for images on the selected background, as specified in the image fields of the record in the map parameters table **220**.

As can be appreciated by one of skill in the art, a story map builder utility **200** in accordance with the present invention may be constructed using available web site development, report creation and database programs. In an embodiment of the present invention operated as an on-line service, the story map builder utility **200** for creating a graphical depiction of events may be created using an available web site development

program, such as the WEBOBJECTS development tool. WEBOBJECTS may be used to determine the look and feel of the story map builder utility **200** by determining the HTML code that is dynamically generated in response to user selections. In connection with the story map builder utility **200**, a report generating tool such as REPORTMILL may be used to generate the output (e.g. HTML, QUICK TIME, .pdf, or FLASH files) provided to the client computer **112**. In addition, a database program, such as OPEN BASE, may be used to create and maintain the various tables.

With reference now to **Fig. 3**, a representative background **300** is illustrated. Depicted on the background **300** is a path **304**. The path **304** is, in the illustrated embodiment, shown as a brick path or road. However, the path **304** may be depicted as any type of continuous line. Preferably, the path **304** suggests movement along a continuum. Therefore, structures such as roads, railroad tracks, rivers, sidewalks, and foot paths are particularly well suited for depicting a path **304**.

Along the path, various mileposts **308a**, **308b**, **308c**, **308d**, **308e** and **308f** are provided. Each milepost **308** may include an image area **312**, and a text area **316**. The image areas **312** are areas along the path **304** in which a selected image may be positioned, as will be described in greater detail below. The text areas **316** are areas in which text specified by a user may be positioned. In the embodiment illustrated in **Fig. 3**, the background template **300** additionally includes graphical elements, such as sign posts **320**, flowers **324**, and plants **328** to enhance the depiction of the path **304**. According to an embodiment of the present invention, the user may select the particular graphical elements **320-328** that are displayed and the location of those elements. According to a

further embodiment of the present invention, the user may choose to have no graphical elements **320-328** on the background **300**. Of course, such graphical elements **320, 324** and **328** are not required. The background template **300** may also include a title area **332** in which a title specified by the user may be placed.

5           With reference now to **Fig. 4**, the operation of an embodiment of the present invention in connection with building a story map is illustrated. Initially, at step **400**, a user establishes a connection to the server computer **104**. For example, the user may direct a browser **156** associated with the client computer **112** to the universal resource locator (URL) of the server **104** when the network **108** includes the Internet. In response to the establishment of a connection between the server **104** and the client computer **112**, the server application program **136**, and in particular the story map builder utility **200**, may present a web page that allows the user to log in by providing identifying information. As can be appreciated by one of skill in the art, the web page may be constructed using hyper text markup language (HTML). In addition, dynamic aspects of the web page that may be provided can be constructed using FLASH movies to provide animation. At step **404**, the user logs in. The user log-in may include providing various information identifying the user. For example, according to one embodiment of the present invention, the user must supply at least an e-mail address in order to save a story map that the user has created. According to an embodiment of the present invention, the user is not required to log-in in order to begin building a story map. If the user has previously established an account in connection with the system **100**, the user may log in by providing an identifier, such as an e-mail address, and a password.

At step **408**, the user may enter a file name and a title for the story map. In general, the file name is used to identify the particular story map that the user is creating, while the title appears on the face of the story map (*e.g.*, title **332** in **Fig. 3**). The user may then select a desired background (*e.g.*, background **300**) (step **412**). As illustrated in **Fig. 3**, a background **300** provides a plurality of mileposts **308** with respect to which images and/or text may be positioned. Particular backgrounds **300** may differ from one another in the number of mileposts **308** available, the graphical depiction of the path **304**, and the theme or presence of any graphical elements (*e.g.*, graphical elements **320**, **324** and **328**). In addition, the progression of the path **304** across or within the background **300** may vary for different backgrounds. For example, the background **300** depicted in **Fig. 3** features a path **304** that progresses from the upper left of the background to the lower right. Another background that may be selected might provide a path **304** that progresses from the upper to the lower left. As can be appreciated, the particular configuration of a path's **304** progression across a background **300** is limitless. According to still a further embodiment, a path **304** may include branches to facilitate the depiction of a convergence of events. Backgrounds **300** that allow print outs of one background to be joined to another background to create a larger overall story map may also be provided. According to a further embodiment of the present invention, a user may change the selected background **300** even after creation of a story map has begun or has otherwise been completed.

After the user has selected a background **300**, the user may begin to select and edit images and text for association with each milepost **308**. Thus, at step **416**, a

determination is made as to whether the user has selected an image position **312** to edit.

If yes, the user is presented with a listing or menu of image themes. Accordingly, the user then selects one of the image themes from an image gallery (step **420**). The user is then presented with a display of the images included in the selected image theme, from which one of the images from those displayed may be selected (step **424**).

In accordance with one embodiment of the present invention, the server application **136** dynamically constructs the web pages used to present information to the user. For example, in response to the selection of an image theme by the user, the server application **136** may make reference to a report template used to present the appropriate information to the user. In general, the report template includes a listing of the images included in the image theme. The listing of images may comprise a listing of image addresses, files, or other identifiers. The web page presented to the user is dynamically generated in that certain elements, such as the particular images displayed, are retrieved from the collection of stored images **212** according to the listing. As can be appreciated by one of skill in the art, this arrangement allows different image themes to share individual images, while minimizing the size of the web pages used to display images included in the image themes.

After an image has been selected, or if an image position **312** has not been selected to edit, a determination is made as to whether a text position **316** has been selected for editing (step **428**). If a text position **316** has been selected for editing, the user is provided with a text box in which the desired text may be entered (step **432**). The number of characters that can be entered in the text box may be limited in order to ensure

that the text will fit in the selected text position **316** along the path **304**. In accordance with one embodiment of the present invention, the number of characters that may be entered can be varied according to the selected font type and/or size. According to a further embodiment of the present invention, a user may specify up to 150 characters for each text position **316**.

After any desired text has been entered, or if a text position **316** has not been selected for editing, a determination is made as to whether the user desires to edit additional mileposts **308** (step **436**). If yes, the system returns to step **416**, and the user may select additional image positions **312** and text positions **316** for editing. Although **Fig. 4** depicts the selection of an image position **312** prior to a text position **316** for a milepost **308**, such a relationship is not required. For example, in accordance with one embodiment of the present invention, a user may select any image position **312** or any text position **316** along a path **304** for editing simply by operating a pointing device (*e.g.* mouse **172**) to select the desired position **312** or **316**. Accordingly, a user may selectively edit any image position **312** and any text position **316** in any order the user desires.

If the user has completed editing of the background **300**, the system proceeds to step **440**, at which point the story map may be previewed. In accordance with one embodiment of the present invention, the user may, in addition to review of the story map on a display **164** associated with the client computer **112**, print a hard copy of the story map (*e.g.*, on printer **160**). In accordance with one embodiment of the present invention, the user is limited to printing a black and white version of the story map if a final version

has not been purchased. Previewing the story map allows the user to determine whether additional editing is desired before a final version of the story map is purchased.

Accordingly, at step 444, a determination is made as to whether the user wishes to continue editing the story map. If additional editing is desired, the user is allowed to make any such edits. Although in Fig. 4 the system is depicted as returning the user to step 408, at which a name and title 332 for the story map may be entered, a return to this step is not required. For example, the user may instead choose to edit a image position 312 or text position 316 without returning to blocks allowing the name and title 332 of the story map. Furthermore, a user may choose to edit an image position 312 or a text position 316 by directing a pointing device to the desired position 312 or 316 and selecting that position 312 or 316.

After the user has completed any additional editing, or if no additional editing is desired, the user may purchase and download a final version of the story map (step 448). In general, the final version of the story map is downloaded as a unitary graphical image. For example, the final version may be provided as a portable document format (.pdf) file. In addition, the final version of the story map may be provided to the user in full color and at a higher resolution than is provided in connection with preview versions or with versions intended for display on a display 164 associated with the client computer 112, for example while the story map is being constructed. In accordance with an embodiment of the present invention, the final version of the story map may be downloaded to a client computer 112 using a dial-up number as the network interface 140 in less than 3 minutes.



In accordance with still another embodiment of the present invention, the user may select to download a large format (*e.g.*, poster size) version of the story map, rather than a standard letter size version. In accordance with a further embodiment of the present invention, the large format version is provided at an increased resolution as compared to the standard letter size version. The larger and/or higher quality final version may be provided at additional cost to the user, or may simply be provided to a user in response to a request for the higher quality version. For example, where the user has a printer capable of producing a hard copy of the story map at the enhanced resolution of the higher quality version, the only additional cost to the user may be an increased download time.

As an additional output option, the user may choose to send an electronic copy of the final version of a story map to someone other than the user. For example, if the story map has been created by the user as a gift, the final version of the story map may be sent directly from the server **104** to the recipient's e-mail address. According to a further embodiment of the present invention, multiple copies of the final story map may be sent to recipients by e-mail.

A final version of a story map may also be provided to a commercial printer capable of producing large format hard copy. Delivery of the story map in electronic (*e.g.* portable document format or .pdf) form may be completed by e-mailing the story map file directly from the server **104** to the commercial printer. Alternatively, the user may e-mail the file from the client computer **112**. As a further alternative, the commercial printer

may be provided with the file on removable media, such as a floppy disk, CD-R disk, or CD-RW disk.

**Fig. 5** is an example of a story map **500** created using the story map builder of the present invention. In **Fig. 5**, the path **504** can be seen to be a brick or stone walkway. Along the path **504**, seven mileposts **508a-g** are shown. Each milepost **508a-g** includes an associated image **512** and text **516**.

As can be appreciated from a review of the sample story map **500**, the story of a couple's life together, from the time they met until the present, is presented. Thus, at the first milepost, the text **516a** describes the couple meeting on a blind date. The image **512a** associated with the first milepost **508a** depicts a blindfolded couple running towards one another. Accordingly, it can be appreciated that the creator of this story map **500** chose a first image **512a** that complemented the entered text **516a**. The story then proceeds in chronological order along the path, and through mileposts 2-7 (**508b-508g**). In the following description, the steps that can be taken by a user to create the example story map shown in **Fig. 5** utilizing an embodiment of the present invention are described.

With reference now to **Fig. 6**, a screen shot of a home page **600** that may be presented to a user after a connection is established with the server **104** is shown. Included in **Fig. 6** is a story map button **604**, allowing the user to choose to create a story map.

**Fig. 7** illustrates a screen shot of a story map home web page **700** that may be presented to a user following selection of the story map button **604** of **Fig. 6**. The story map home page **700** includes a first link **704** that can be selected to allow a user to log in.

A second link **708** allowing a user to create a new map or manage previously created maps may also be provided. The user may choose to create a map by selecting the first link **704** prior to logging-in. However, the user will generally be required to log in before a copy of the story map is saved, before a preview version may be downloaded, or before a final version of a story map (*e.g.*, story map **500**) may be purchased and downloaded. In addition, story maps created while logged-in to the system are available for editing during later sessions if the same log in information (*e.g.*, e-mail address and password) are used in the later session.

**Fig. 8** illustrates a log-in web page **800** presented to a user in response to a selection of the log-in link **704** illustrated in **Fig. 7**. The log-in web page **800** allows a user to establish a new log-in identity, or to log in using an identity previously established. **Fig. 9** illustrates a map selection page **900** presented to a user after the log-in procedure has been completed. Thus, after logging in, the user may access previously created story maps by clicking on the work on map link **904**, or may create a new story map by clicking on the new map link **908**. In connection with a user desiring to continue work on a story map that has already been started, the name of the story map may be selected in the map selector menu box **912**.

With reference now to **Fig. 10**, a new map name and title web page **1000** presented to a user creating a new story map is illustrated. A first text box **1004** allows the user to enter a file name for the story map, while a second text box **1008** allows the user to enter a title for the story map. With reference to the sample story map illustrated in **Fig. 5**, the user, or creator of the sample map **500** might enter "copy sample 1 map" as

the file name in the first text box **1004**, and "TO A GREAT MARRIAGE!" in the second text box **1008** as the title **532**. In addition to being presented after completing the log-in procedure and choosing to create a new story map, the new map name and title page **1000** illustrated in **Fig. 10** can be reached by selecting the link to create/manage new maps (second link **708**) shown in **Fig. 7**.

With reference now to **Fig. 11**, a page **1100** presented to a user in response to a selection to work on a previously created story map (*e.g.* in response to a selection of link **904** in **Fig. 9**) is illustrated. The options presented after a user chooses to work on a previously created story map include making a copy of a selected story map **1104**, removing the selected story map from the user's list of story maps **1108**, and creating a new story map **1112**. The story map that is copied in response to a selection of button **1104** or that is removed in response to a selection of button **1108** is selected from the list of story maps associated with the logged-in user presented in the story map selector **1116**. It will be noted that making a copy of a story map may be useful where, for example, a user desires to create a new story map that incorporates information or selections associated with a previously created story map.

With reference now to **Fig. 12**, a page **1200** presented to a user allowing the user to select from a number of backgrounds **1202a-d** are illustrated. The selection of a background **1202** may be made as a first step in creating a new story map, or after a story map has already been started or completed. In general, the different backgrounds **1202** provide paths **1204** that progress across the page differently. For example, the first background **1202a** features a path **1204a** that progresses from the top left to the bottom

right, the second background **1202b** has a path **1204b** that progresses from the top right to the lower left, the third background **1202c** has a path **1204c** that progresses from the top left to the bottom right, and the fourth background **1202d** has a path **1204d** that is identical to that of background **1204c**, but the mileposts progress from the lower right to the upper left. In general, although a user may enter text and select images for association with mileposts in any order desired, selecting the standard path with reverse image order **1202d** associated with background **1204d** after a story map has been completed or started using the third background **1202c** will result in a reversal of the order of the text and images along the path **1204**. For example, in order to create the story map **500** illustrated in Fig. 5, the user would select the fourth background **1202d** having a standard path with reverse image order **1204d** by operating a pointing device (*e.g.* mouse **172**) to position a cursor over the fourth background **1202d** and clicking a button provided in connection with the pointing device to select that background. According to another embodiment of the present invention, additional or alternate backgrounds **1202** may be provided. Furthermore, according to yet another embodiment of the present invention, the backgrounds **1202** may differ not only in the paths **1204** that are provided, but in the graphical elements presented with the background **1202**, the colors associated with the background **1202**, the depiction of the path **1204** itself in the number of available mileposts, etc.

With reference now to Fig. 13, a selected background page **1300** displayed to a user following the selection of the background **1202d** having standard path with reverse image order **1204d** is illustrated. The selected background page **1300** is the page a user

initially is presented with after a background (e.g., background **1202a, b, c** or **d**) has been selected. As shown in **Fig. 13**, the selected background **1300**, here the background **1202d** having a standard path with reverse image order **1204d**, includes seven image positions **1312a-g** and seven text positions **1316a-g**. As explained in the instructions **1302** shown in **Fig. 13**, to place an image along the path **1304**, a user must click on any one of the image positions **1312**. Similarly, to enter or edit text in any of the text positions **1316**, a user is simply required to click on the text position **1316** to be edited.

With reference now to **Fig. 14**, an image theme selection page **1400** displayed to a user in response to a selection of one of the image positions **1312** along the path **1304** is illustrated. In particular, the user is presented with a listing or menu of image themes **1404** used to subdivide the images available for placement on a story map (*i.e.* in the image positions, for example image positions **1312** along the path **1304**). As shown in **Fig. 14**, the themes **1404** may include achievements; future; growing up; interests/hobbies; marriage/anniversaries; sports/athletics; babies; generic; high school/college; life happens; retirement; and work/career. The division of the complete gallery of images into themes **1404** facilitates the selection of an image by allowing a user to view only those images that are in accordance with a desired theme. In addition, the division of the entire gallery of images into themes **1404** allows the user to be presented with a selection of images that is likely to contain one image suitable for the user's purposes (*i.e.* in accordance with a desired theme) while removing the need to provide all of the available images to the user at once. Accordingly, the amount of data that must be passed to the user is lessened, increasing the speed with which a story map may be

constructed, particularly where the network 108 used to interconnect the server 104 to the client computer 112 interposes significant data transmission delays. Furthermore, the provision of themes 1404 allows the user to efficiently locate a suitable image, even if a very large number of images in total are available for placement on a story map.

5           The user may select a theme 1404 using a pointing device (*e.g.*, mouse 172). After a theme 1404 has been selected, the user may be presented with a selection of images related to the selected theme. Alternatively, the user may be presented with a menu or list of sub-themes 1504, such as are illustrated in Fig. 15. In general, Fig. 15 illustrates a subtheme selection page 1500. The subthemes 1504 are used to further  
10       divide the available images, and to allow the user to more narrowly define or describe a desired image. After a subtheme 1504, if provided, has been selected, the images included in that subtheme 1504 may be displayed. If no subthemes 1504 are provided, the images are displayed after the selection of a theme 1404. According to an additional embodiment of the present invention, subthemes 1504 may include sub-subthemes.

15           With reference now to Fig. 16, an example of an image selection page 1600 is illustrated. In general, an image selection page is presented after a theme 1404 or subtheme 1504 from which images may be selected is chosen by the user. In general, any one of the images 1604 displayed can be selected by pointing to and clicking on the desired images 1604 (*e.g.*, with mouse 172). The images 1604 need not be exclusively  
20       assigned to a single theme 1404 or subtheme 1504. That is, if a single image 1604 can appropriately be classified in a number of themes 1404 and/or subthemes 1504, then that image 1604 may be included in each of those themes 1404 and/or subthemes 1504. For

example, an image of a figure holding a trophy might be included among the images in the sports/athletics theme, the achievements theme, and the high school/college theme under the subtheme achievements/honors.

In order to facilitate the sharing of images **1604** among themes **1404** and subthemes **1504**, it is convenient to construct pages displaying images in connection with themes **1404** and subthemes **1504** such that those pages refer to images included in the theme **1404** or subtheme **1504** by a file name or address, rather than by incorporating the image data itself for the images in the theme **1404** or subtheme **1504** page. For example, the image selection page **1600** illustrated in Fig. 16 could be constructed by fetching the appropriate images **1508** according to a listing of identifiers associated with those images **1508** when the user selects a subtheme **1504**. For example, the images **1604** of Fig. 16 may be presented in response to a selection of the "how you met" subtheme **1504** of the "marriage/anniversary" theme **1404**. In this way, pages presenting selections from the image gallery are dynamically generated when presented to a user.

In order to build the example story map **500** shown in Fig. 5, the user would, after selecting the background **1202d** as described above, click on the first image position **1312a** (see Fig. 13). After being presented with the image theme selection page **1400**, the user would select from the marriage/anniversary theme **1404** (see Fig. 14). The subtheme **1504** "courtship/dating" could then be selected from the subtheme selection page **1500**, at which point a number of images **1604** in accordance with a theme of courtship and dating are presented as part of the image selection page. The user would then select the desired image, here an image of a blindfolded couple, for example by clicking on that image



1604. The user would then be presented with the selected background **1202d**, with the selected image **1604** in the first image position **1312a** (see **Fig. 17**).

In order to place text on a background, the user selects a text position **1316** (see **Fig. 13**). For example, the user selects text position 1 **1316a** using a pointing device.

5 After making the selection of a text position **1316**, the user is presented with a text entry page **1800** having a text entry field **1804** (see **Fig. 18**). The desired text may be entered in the text entry field **1804**, for example by typing it in with a keyboard **168** associated with the client computer **112**. By pressing the button **1808** labeled "place this text on the story map", for example using a mouse, the user is presented with a screen showing the entered

10 text in position on the selected background **1202d** (see **Fig. 19**). For example, to enter the text shown at the first text position **516a** of the example story map **500** in **Fig. 5**, the user would select the text position 1 field **1316a** alongside the path **1304** (**Fig. 13**), enter the desired text in the text field **1804** (**Fig. 18**), and press the "place text" button **1808**. The user would then be presented with the selected background **1202d** with the entered

15 text in the first text position **1316a** (see **Fig. 19**).

After the user has selected images and entered text, the story map may be previewed. The option to preview the story map may be provided as a menu option or radio button presented to the user. For example, with reference to **Fig. 13**, the option to preview a story map may be provided as a button **1320** (see **Fig. 13**). Upon choosing to

20 preview the story map, the user may download a copy of the story map for printing by the client computer **112**. In accordance with an embodiment of the present invention, the story map is downloaded as a graphic file. According to a further embodiment of the

present invention, the story map for preview is downloaded as a black and white image file having a relatively low resolution. The preview copy is, according to one embodiment of the present invention, provided as a .pdf file. The user may then print the preview copy of the story map as desired.

5           The user may also choose to purchase the story map that the user has created by selecting the purchase/download button (*e.g.*, button **1324**). After selecting the purchase/download button **1324**, the user is asked to provide payment information, if such information has not already been collected. Upon payment, the user is provided with the finalized story map as a color image. In addition to being in color, the final  
10       version of the story map may be provided at a higher resolution than was utilized in connection with the construction of the story map, or in connection with a preview copy of the story map. The final version of the story map is, in accordance with an embodiment of the present invention, provided as a .pdf file.

          In order to facilitate the generation of a high resolution of the selected background  
15       and images, the server application **136** may generate a report that includes reference to a high resolution copy of the background **300** and of the selected images. That is, the report used to generate the final version of the story map may make reference to image files containing higher resolution versions of the images used to construct the story map than were provided to the user in connection with the construction of the story map or the  
20       generation of a preview copy. According to a further embodiment of the present invention, an even higher resolution version of the story map may be provided for additional cost to users having access to a printer capable of providing a high resolution

version and/or a larger page size of the completed story map. After generating the report, the resulting collection of images and, if specified, text, is provided as a single image to the user.

The foregoing discussion of the invention has been presented for purposes of illustration and description. Further, the description is not intended to limit the invention to the form disclosed herein. Consequently, variations and modifications commensurate with the above teachings, within the skill and knowledge of the relevant art, are within the scope of the present invention. The embodiments described hereinabove are further intended to explain the best mode presently known of practicing the invention and to enable others skilled in the art to utilize the invention in such or in other embodiments and with various modifications required by their particular application or use of the invention. It is intended that the appended claims be construed to include the alternative embodiments to the extent permitted by the prior art.